

An optical device for determining the presence of a first nucleic acid in a sample comprising a second nucleic acid complementary to the first nucleic acid and able to hybridize with the first nucleic acid under hybridizing conditions, the second nucleic acid being bonded to a solid support, wherein the solid support is formed as a light reflecting surface having a first thickness when bonded to the second nucleic acid, and wherein the light reflecting surface has a second thickness, wherein the first and second nucleic acids are hybridized, and the first and second thicknesses can be distinguished by their effect on the light reflecting properties of said light reflecting surface independent of any label present on the first nucleic acid.